



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Timothy P. Tully, Joshua I. Dubnau, Michael Davis, Jan Mous and Ulrich Certa # 11/ MW

Application No.: 09/523,066 Group Art Unit: 1655

Filed: March 10, 2000 Examiner: B. Forman

Title: GENE CHIP TECHNOLOGY FOR DETERMINING MEMORY GENES

CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231	
on <u>12-18-01</u>	<u>Sandra Jammal</u>
Date	Signature
<u>Sandra Jammal</u>	
Typed or printed name of person signing certificate	

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

This Information Disclosure Statement is submitted:

☐ under 37 CFR 1.129(a), or  
(First/Second submission after Final Rejection)

☐ under 37 CFR 1.97(b), or  
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

☒ under 37 CFR 1.97(c) together with either:

☒ a Statement under 37 CFR 1.97(e), as checked below, or

☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with:

☐ a Statement under 37 CFR 1.97(e), as checked below, and

☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

☐ under 37 CFR 1.97(i):

Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.  
(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☒ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
- ☒ Copies of the cited references (AQ, AL2-AM2 and AR2-AW2) are enclosed.
- ☐ Copies of cited references are enclosed except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]
- ☒ The listed references were cited in the enclosed International Search Report in a counterpart foreign application. Reference AV was also cited in the enclosed International Search Report.
- ☐ The "concise explanation" requirement (non-English references) for reference(s) [ ] under 37 CFR 1.98(a)(3) is satisfied by:
- ☐ the explanation provided on the attached sheet.
  - ☐ the explanation provided in the Specification.
  - ☐ submission of the enclosed International Search Report.
  - ☐ the enclosed English language abstract.

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's  
Initials

\_\_\_\_\_ U.S. Patent Application No. [    ], by [inventor(s)], filed [    ], Docket No.: [    ]

\_\_\_\_\_ U.S. Patent Application No. [    ], by [inventor(s)], filed [    ], Docket No.: [    ]

\_\_\_\_\_ U.S. Patent Application No. [    ], by [inventor(s)], filed [    ], Docket No.: [    ]

\_\_\_\_\_  
Examiner

\_\_\_\_\_  
Date

☐ A copy of each above-cited application, including the current claims, is enclosed.

☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [    ], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

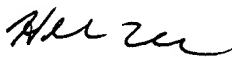
☐ Please charge Deposit Account 08-0380 in the amount of \$[    ]. A copy of this Statement is enclosed.

☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By



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Dated: *December 18, 2001*

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>1314.1058003</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 00/ 06234</b>	International filing date (day/month/year) <b>10/03/2000</b>	(Earliest) Priority Date (day/month/year) <b>10/03/1999</b>
Applicant <b>COLD SPRING HARBOR LABORATORY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/06234

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C12Q C07K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>SILVA A J ET AL: "CREB AND MEMORY"</p> <p>ANNUAL REVIEW OF NEUROSCIENCE, ANNUAL REVIEWS INC., PALO ALTO, CA, US, vol. 21, 1998, pages 127-148, XP000900517 ISSN: 0147-006X page 130, paragraph 4 -page 131, paragraph 1</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	1-20

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \* & \* document member of the same patent family

Date of the actual completion of the international search

26 September 2001

Date of mailing of the international search report

10/10/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Osborne, H

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/06234

**C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>GUZOWSKI J F ET AL: "ANTISENSE OLIGODEOXYNUCLEOTIDE-MEDIATED DISRUPTION OF HIPPOCAMPAL CAMP RESPONSE ELEMENT BINDING PROTEIN LEVELS IMPAIRS CONSOLIDATION OF MEMORY FOR WATER MAZE TRAINING"</p> <p>PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 94, March 1997 (1997-03), pages 2693-2698, XP000934313</p> <p>ISSN: 0027-8424</p> <p>cited in the application</p> <p>the whole document</p>	1-20
Y	<p>TULLY T ET AL: "INDEPENDENT MEMORIES IN DROSOPHILA AFTER PAVLOVIAN CONDITIONING"</p> <p>SOCIETY FOR NEUROSCIENCE ABSTRACTS, SOCIETY FOR NEUROSCIENCE, US, vol. 19, no. 1/3, 1993, page 1066</p> <p>XP000566270</p> <p>ISSN: 0190-5295</p> <p>see abstract 440.8</p>	1-20
Y	<p>WO 97 12976 A (COLD SPRING HARBOR LAB)</p> <p>10 April 1997 (1997-04-10)</p> <p>see whole document, especially pages 1-3.</p>	1-20
Y	<p>CAVALLARO S ET AL: "Late memory-related genes in the hippocampus revealed by RNA fingerprinting"</p> <p>PROC. NATL. ACAD SCI USA, vol. 94, September 1977 (1977-09), pages 9669-9673, XP002178412</p> <p>the whole document</p>	1-20
Y	<p>BOURTCHOULADZE R ET AL: "Different training procedures recruit either one or two critical periods for contextual memory consolidation, each of which requires protein synthesis and PKA"</p> <p>LEARNING AND MEMORY, vol. 5, no. 4-5, 1998, pages 365-74, XP001024521</p> <p>the whole document</p>	1-20
Y	<p>KOGAN J ET AL: "Spaced training induces normal long-term memory in CREB mutant mice"</p> <p>CURRENT BIOLOGY, vol. 7, no. 1, 1997, pages 1-11, XP001024551</p> <p>see whole document, especially "Conclusions, page 9.</p>	1-20
	-/--	

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/06234

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PEDREIRA M ET AL: "Massed and spaced training build up different components of long-term habituation in the crab Chasmagnathus" ANIMAL LEARNING AND BEHAVIOUR, vol. 26, no. 1, 1998, pages 34-45, XP001024597 the whole document	1-20
Y	WO 98 49342 A (COCKBAIN JULIAN R M; ;FORSKNINGSPARKEN I AAS AS (NO); LOENNEBORG AN) 5 November 1998 (1998-11-05) the whole document	1-20
A	WO 96 11270 A (TULLY TIMOTHY P ;COLD SPRING HARBOR LAB (US); REGULSKI MICHAEL (US) 18 April 1996 (1996-04-18) the whole document	1-20